August 6, 1958

Dear Josh:

Sermonti has sent his strains, in duplicate, for our work this Fall. He and I will want to carry out side by side comparisons, I am certain. We stored one set of strains away and opened the other set to validate the markers. I was anxious to do this, in view of earlier difficulties with Sermonti's strains. Sermonti's strain 14 seems O.K. so far (It did in 1956) but #5 is not: 1) it contains or gives rise to several prototrophs; 2) has material with additional requirements and 3) some with only partial requirements. This may be chance contamination or heterogeneity in old cultures, I don't know. The problem: I have not found a way to bring up this problem with Sermonti in our correspondence. Because of this, I have avoided using his strains previously - as much as possible. I hope that it will be easy to discuss this with him when he is here. I am concerned that (in view of apparent misunderstanding which we have had in completing arrangements for his visit this Sept, Oct and Nov) he will be offended. (Everything seems set for Sep - Nov now). I desire that our relationship be cordial and resolve our differences.

As I have said on many occasions, I firmly believe that there is a sexual (genic recombinational at least) system but 1) we have not definitively proven it and 2) what we are currently studying may not be it. This still holds by in large, except that my graduate student (Dwight Anderson) and I have better reason to believe in a recombinational system every week. There are no unselected nutritional markers unfortunately, as tested in frank mixtures. But phage susceptibility is rather good = not perfect. We have 3 Ø which show every promise of presenting reasonable recombinational figures.

It is still premature, but we have some sort of compatibility system, very reminiscent of F in E. coli.

strain	degree of compatibility
114 + 124	---------------------> +++
204 + 205	---------------------> ++++
205 + 114	---------------------> —
205 + 124	---------------------> + to ++
204 + 114	---------------------> ++
204 + 124	---------------------> ++

We don't really know at what level but   fusion is suspected on the basis of cursory microscopic examination.

There is much more I would like to write but I hope Sermonti and I can visit you a few times this Fall and then I can talk to you until you tire.

The rumbles in our department increase. Dennis Watson is becoming disgusted and seriously contemplating leaving. Main problems are 1) growth of a huge cancer research project under Syverton which already has gobbled up 2/3 of the departmental space (a conservative estimate) and a potential separation of dairy bacteriol into a department of its own.

There is no sentiment for a Genetics Dept (in fact Sheldon Reed is opposed) so I see no future at Minn. My lab facilities are good and I have a promise of more space when I need it, so I am not desperate. But I will appreciate your remembrance if a suitable opening occurs.

My very best wishes.

Gaylen.

Davis
[illegible]
Madison